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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/827,192	04/05/2001	Robert Lee Popp	15583	5376

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KIMBERLY-CLARK WORLDWIDE, INC.
401 NORTH LAKE STREET
NEENAH, WI 54956

EXAMINER

AFTERGUT, JEFF H

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 04/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/827,192	Applicant(s) POPP ET AL.	
	Examiner Jeff H. Aftergut	Art Unit 1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,8-15,17 and 18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,8-15,17 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claims 1, 3, 8-10, 12, 14, 15, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elsberg in view of Jessup optionally further taken with either one of Van Gompel et al (newly cited) or Yamamoto et al (newly cited).

Elsberg suggested that it was known at the time the invention was made to make a refastenable underpant which included the steps of providing discrete articles which included first and second waist regions and a crotch region wherein the discrete articles were folded about the crotch region with a conventional blade folder 90 which folded the article along the crotch region 26 thereof. The reference additionally suggested that subsequent to the folding at the crotch region the undergarment side panels were folded with a folding board arrangement 100 where the fasteners 62 were folded over. The arrangement as depicted in Figures 1 and 2 taught the folding of the crotch region of the discrete article followed by folding of the side panels which included the fastener components and subsequently engaging the fastening components of the undergarment together by passing the assembly through a pair of nip rollers, see column 7, lines 15-32. The reference failed to make mention of the use of a retractable material in the waist region which was retracted subsequent to activation of the retractable material. The reference did suggest that normal manufacturing materials would have been utilized in the disposable undergarment. Additionally the reference failed to expressly suggest the specified waist to hip circumference ratio as defined in the claims.

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Jessup suggested that those skilled in the art at the time the invention was made would have formed discrete articles as undergarments by folding over the discrete article in the crotch region, sealing the side edges and subsequently retracting the retractable material with the application of heat in order to shrink the same to provide for an elasticized waist region in the disposable absorbent article. Applicant is more specifically referred to steps 146, 148, and 150 of Jessup and the associated description of the same. The use of retractable material in Jessup was to provide a material which was capable of providing an elastic zone when desired in the finished assembly via the activation but which remained inactive (or unretracted) until such time in the process where it was desirous to activate the same (note that elastics in a contracted state after bonding would have presented problems relating to the manufacture of the assembly in that sometime the material would be misaligned in the process line which operated at high speeds). Additionally note that Jessup provided for the elastic in the waist region of the undergarment. It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the elastic waist materials of Jessup in the process of Elsberg et al where the elastics were retracted with the application of heat subsequent to the assembly of the article. The combination nonetheless, failed to teach the specific waist to hip circumference ratios as defined in the claim. It should be noted that those versed in the art at the time the invention was made would have provided the waistband in the undergarment with the specified degree of tension in the elastics such that when in use (and in use a load such as urine or water or BM would have been present) the undergarment would have been retained in place. To do so would have been intuitive as not providing the necessary tensioning of the elastics in the waistband so that the training pant and/or undergarment was retained about the waist in use would have been

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detrimental to the intended use of the product. Additionally, one skilled in the art would have provided the elastics in the waist with such tensioning that the user was able to open up the undergarment to apply the same in use. It would have been obvious to one of ordinary skill in the art at the time the invention was made to adjust the tension in the elastics in the waistband and/or the type and amount of elastic provided in the waist region of the finished assembly such that the disposable absorbent undergarment was capable of being used properly (i.e. retained on the user under load and easily placed on and off) when making the same according to the processing of Elsberg as modified by Jessup. Such provisions of the elastic in the waist region would have been viewed as nothing more than routine optimization for the product and would have been performed by the ordinary artisan in the normal course of business.

With regard to the dependent claims, the applicant is advised that those skilled in the art at the time the invention was made would have applied the heat to retract the elastics of Jessup. Additionally regarding those claims relating to the amount of retract, one skilled in the art would have determined the amount of retraction as a function of the desired fit for the final assembly and such would have been determined through routine experimentation. Regarding those claims which recite the retaining of the retractable material in a compressed state, note that the retractable materials of Jessup were in fact in a stressed condition and that the application of heat released such stresses. The compression of a retractable material is taken as conventional in the art of such retractable materials and it would have been within the purview of the ordinary artisan to employ such known retractable materials (as such would have been viewed as a functionally equivalent alternate expedient for the use of heat shrinkable materials). Note that the order of the operation is immaterial in that Elsberg provided temporary side seams which were

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releasable and the side seams were formed prior to the attachment of the releasable fasteners in Elsberg, see temporary welds 64. Thus, one skilled in the art would have understood that the processing according to Elsberg would have included controlling the position of the side panels (with the temporary bonding) and it would have been obvious to those skilled in the art to shrink the elastic either before or after the folding and attachment of the mechanical fasteners as such would have been viewed as alternative processing.

To further emphasize that those skilled in the art would have desired the specified hip to circumference ratios in the finished disposable absorbent article, the references to either one of Van Gompel et al or Yamamoto et al are cited. The reference to Van Gompel suggested that one skilled in the art would have placed the elastics in the waist region under greater tension than the body elastics of the undergarment in order to provide a snug fit over a wide range of waist to hip ratios (column 10, lines 1-14, column 10, lines 23-36). Clearly, one viewing the reference to Van Gompel would have understood that the tension in the waist elastics would have been readily controlled to provide the desired fit in the finished assembly and such would certainly have included provision of when the undergarment was under load (in use). The reference to Yamamoto et al clearly suggested that one skilled in the art at the time the invention was made would have provided a waistband with suitable elasticity such that it prevented the pad member from slipping down due to the load of the pad member having excretion therein, see column 4, lines 34-40. The applicant is advised that this is all that the specified waist to hip circumference ratios of the claim do (see the portions in the specification referred to by applicant in the response). It would have been obvious to one of ordinary skill in the art at the time the invention was made to form a disposable absorbent article which included the specified waist to hip

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circumference ratios in order to enable the finished article to retain a load in use as well as enable one to easily apply the undergarment to provide a good fit as suggested by either one of Van Gompel et al or Yamamoto et al in the operation of making a disposable undergarment as set forth by Elsberg as modified by Jessup.

3. Claims 2, 4, 5, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as set forth above in paragraph 2 further taken with either one of Roland et al or Thorson et al.

The references as set forth above in paragraph 2 suggested that those skilled in the art at the time the invention was made would have incorporated a heat shrinkable material in the disposable absorbent article, however the shrinkable material was retracted as a function of the heat applied to the same. The references do not suggest the use of electromagnetic radiation application to the elastic material to heat the same and consequently shrink the same. The reference to Roland suggested that as an alternative to application of heat to shrink the elastics those skilled in the art at the time the invention was made would have applied infrared radiation to the elastics to shrink the same along with the application of heated air directed on the elastics located in the waist region of the disposable absorbent articles, see column 2, lines 52-column 3, line 7 and the abstract of the disclosure for example. The reference to Thorson et al suggested that those skilled in the art at the time the invention was made would have understood to utilize electromagnetic radiation to shrink the elastics in the processing and that by controlling the radiation emitted one skilled in the art would have been capable of better controlling the application of heat during the processing, see column 1, lines 36-60, column 2, lines 6-21. It should be noted that in each of Roland and Thorson the radiation and heated air was directed at

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the waist region of the absorbent article as the absorbent articles included waist elastics which needed to be activated. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a radiant heating mechanism which included electromagnetic radiation as well as heated air for activating the heat shrinkable elastics of the undergarments as set forth above in paragraph 2 as such would have been viewed as a functionally equivalent alternate expedient for heating the heat shrinkable materials in a disposable undergarment. Applicant is advised that where, as here, two equivalents were known for their desired function, an express suggestion of the desirability of the substitution of one for the other is not needed to render such substitution obvious, In re Fout, 213 USPQ 532, In re Siebentritt, 152 USPQ 618.

With regard to claims 4 and 5, note that the references suggested the application of the heated air onto the waist portions of the undergarments and additionally the control of the heated air to apply more to the waist portions than the hip portions of the same.

4. Claims 6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references as set forth above in paragraph 2 further taken with any one Baird et al or Muckenfuhs et al.

The references as set forth above in paragraph 2 suggested all of the claimed features. While the references did not expressly suggest that the elastic material was retained in a compressed state and the compression relieved in order to allow for the retraction of the elastics, such was taken as conventional in the art at the time the invention was made. As established in paper no. 6, one skilled in the art would have viewed retractive material which was held in an elastic state via compression and subsequently allowed to retract by relieve of the contraction as an alternative elastic material which was functionally equivalent to the heat shrinkable materials

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of Jessup. Applicant is advised that where, as here, two equivalents were known for their desired function, an express suggestion of the desirability of the substitution of one for the other is not needed to render such substitution obvious, In re Fout, 213 USPQ 532, In re Siebentritt, 152 USPQ 618. The references to each one of Baird et al or Muckenfuhs et al suggested that it was known to provide an elastic material which was restrained from contraction via retaining the elastic material in a compressed state and relieving the compression and/or compaction in order to retract the elastic material after manufacture of the disposable absorbent article, see Baird et al at column 2, lines 8-21, column 2, line 50-column 3, line 18, column 9, line 49-column 10, line 19 or Muckenfuhs et al at column 2, lines 30-48, column 13, line 64-column 14, line 35. Clearly, in the art of manufacturing a disposable absorbent article it was art recognized the compressed elastic which retracted after relief of the compression were known in the art at the time the invention was made as an alternative material to heat shrink elastics which were activated after formation of the absorbent articles. It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the constrained elastics material of either one of Baird et al or Muckenfuhs et al as such would have been viewed as an alternative material to that of the heat shrinkable materials of Jessup when manufacturing a disposable absorbent article.

Response to Arguments

5. Applicant's arguments with respect to claims 1-6, 8-15, and 17-18 have been considered but are moot in view of the new ground(s) of rejection.

The applicant essentially takes the position that the Office must provide evidence that one manufacturing a disposable absorbent undergarment would have been concerned with the ability of the undergarment to stay in place under load as such is what drove applicant to provide for the

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specific waist to hip circumference ratios. The applicant argues that without this evidence the Office is merely shooting in the dark in an "obvious to try" manner (with hindsight) to get at applicant's claimed invention. Applicant is advised that one skilled in the art at the time the invention was made would have certainly been expected to have some basic knowledge of the undergarment being manufactured (i.e. the ordinary artisan is expected to know more than what he reads in a reference, he is presumed to have sufficient basic knowledge to apply and combine features disclosed in the prior art) as well as the various stresses exerted upon the same in use and would have been expected to use this knowledge in the design of the undergarment, see In re Sovish, 226 USPQ 771, In re Bode, 191 USPQ 12, In re Bozek, 163 USPQ 545. One making the undergarment where the elastics were provided in the waist region would have known to provide the elastics with suitable elasticity such that the finished assembly was capable of being adequate in use (i.e. when worn by the wearer under load). To think that one skilled in the art of making an undergarment of this nature would disregard the necessity for retaining the undergarment on the wearer in use and under load would have been repugnant to the product being manufactured. The manufacturer certainly would have desired to make a product which was usable and which worked. The optimization of the degree of elasticity in the waist would have ensured a good fit about the waist as well as ensured that the user did not lose the underpant in use and under load.

Applicant is advised that the newly cited references to Van Gompel and Yamamoto et al evidenced that those skilled in the art at the time the invention was made would have been concerned with the controlling of the waist elastics (to provide the desired elasticity in the waistband in order to retain the undergarment in place and comfortably in place even when under load). As such one versed in the art would have certainly been led to optimize the elasticity in

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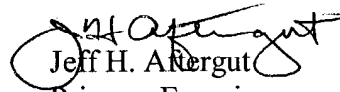
this region in order to attain an undergarment which was suitable for use by the wearer under load. Applicant's arguments to the contrary have been considered but are not persuasive.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff H. Aftergut whose telephone number is 571-272-1212. The examiner can normally be reached on Monday-Friday 7:15-345 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jeff H. Aftergut
Primary Examiner
Art Unit 1733

JHA
March 29, 2004